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ABSTRACT

The booklet provides a framework to guide development of curriculum components of the Maine Studies Curriculum Project. Funded in 1976 by the Elementary and Secondary Education Act in response to a section of Maine School Law, the project aims to develop and test a K-12 curriculum, accompanying instructional resources, and a teacher education program. Maine studies is defined as study of the state's social life, government, economy, technology, and environment from historical, current, and future perspectives. The guide contains 14 sections which discuss rationale and aspects of curriculum development. Two sections define the term curriculum, diagram the interrelationship among components of the Maine Studies Curriculum, and list curriculum elements. Another section identifies student goals in attitude and skill areas, as well as goals for the learning environment. Guiding theories of learning and instruction are summarized, and content elements are listed. These include cognitive understandings of themes and concepts, attitudes and values, and process skills. Concluding sections emphasize the importance of proper learning environment, relevant educational activities, and evaluation techniques. (Author/AV)

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The Maine Studies Curriculum

PHILOSOPHY AND FRAMEWORK

THIRD DRAFT

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MAINE STUDIES CURRICULUM PROJECT
Gardiner Area School Administrative District (MSAD # 11)
(Gardiner, Pittston, Randolph and West Gardiner)

with cooperation from

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INTRODUCTION

Originally enacted in 1955, a section of Maine School Law, as amended requires that "a course in history, geography and the natural and industrial resources of Maine shall be taught in at least one grade from 7 to 12 in all school systems, both public and private."* In spite of this mandate, however, there has been little formal and systematic effort to provide teachers with the necessary curriculum and instructional resources.

To meet this need the Maine Studies Curriculum Project on July 1, 1976, was funded under Title IV-C of the Elementary and Secondary Education Act (ESEA). This is a cooperative project between the Gardiner Area School Administrative District (MSAD #11) which is the sponsoring local educational agency and the Maine State Department of Educational and Cultural Services (MSDECS). During the project's three year period a K-12 curriculum with accompanying instructional resources and a teacher education program will be developed and tested. The curriculum will consist of:

1. A full year Maine Studies course at the junior high level.
2. A guide which will correlate Maine and U.S. history at the junior high level.
3. A series of concept and skill development units at the elementary level.

* Title 20 of the Maine Revised Statutes, Chapter 5, Section 102.

4. A series of problem-centered, futures-oriented units at the senior high level.

The accomplishment of these tasks is being carried out by a project staff consisting of two co-directors, a project assistant and a research and curriculum specialist. Assisting the staff is a Project Advisory Committee and a statewide network of resource people.

An early and important step in the development of the curriculum involves a comprehensive status and needs assessment survey of the nation's state educational agencies, Maine's public and private schools at elementary, secondary and college levels and all teachers in MSAD #11. Other phases involve the identification, development and indexing of instructional resources, curriculum writing, pilot testing, evaluation and teacher program development.

This paper establishes the philosophy and curriculum organizational considerations of the project which guide the development of the curriculum's specific components - the course of study, units and activities - as well as the selection, design and use of instructional resources. This paper is, therefore, a working document which provides direction for the staff in carrying out its tasks. It also is useful in acquainting others with the guiding philosophy and considerations forming the basis of the curriculum.

DEFINITION OF MAINE STUDIES

The concept of Maine Studies may have different meanings for different individuals. To provide a basis for common understanding and to

assist in communicating the nature of the project, the following definition of Maine Studies is given:

> Maine Studies is aimed at developing citizens who have the knowledge, values and skills which result in an active concern for the quality of human life. It involves the study of Maine's social life, government, economy, technology and environment from historic, current and future perspectives.

VALUE OF STATE STUDIES

The state is a unit of government which has certain legal and administrative rights and responsibilities within a geographic area determined by political boundaries. These rights and responsibilities and their administration are determined and carried out through the democratic processes of citizen participation in the government of the state. The concept of state government has historically proven to be a powerful influence on human welfare. Although becoming increasingly complex, the state is still seen as representing a level of participation politics which can be responsive to the values of citizens on issues of their concern. For example, issues on the 1976 Maine ballot brought a 77% turnout of registered voters.

Because of state government's potential to encourage and provide an effective arena for the expression of citizen concern, it is imperative that citizens learn to participate effectively in the political process. State studies as a part of the general education of elementary and

secondary school youth can provide the foundation for effective involvement. More specifically state studies can develop a valuable understanding of the interrelationships between local, state, and national governmental levels and provide perspectives on each which otherwise might be neglected. For example, the roles of the various levels of government in educational issues frequently pivot around state government, and through state and local case studies the effects of national educational decisions on funding priorities can be illuminated. Also, decisions made at the state level, such as decisions regarding the equalization of educational expenditures, frequently have nationwide influence. It is through studies of these kinds of local and national interactions and their macro and micro effects that students can test the validity of broad generalizations.[1]

In addition to the important conceptual understandings students can derive from state studies, special opportunities are presented for developing student skills, For example, through studies of state and local concerns students can become involved with primary or firsthand sources of information, such as state and local archives.[2]

Research of this kind provides increased opportunities to develop those inquiry skills associated with the social scientist. Students can learn the skills of critical thinking and problem-solving with real issues of their concern.[3]

Finally, state studies which directly involve students with ideas, data and problems that they perceive as actually affecting their own lives and those around them have a greater potential for helping them to clarify their own interests, attitudes and values.

BASIC ASSUMPTIONS ABOUT STATE STUDIES

Whenever any task is being undertaken certain assumptions are operating. These usually relate to fundamental reasons for the activity and the way in which it should be conducted. All too often, unfortunately, assumptions are not revealed and clarified early in the planning process. The resulting lack of definition and communication of assumptions may, for example, lead to problems arising because support and commitment from sponsor and target audiences were misread or doubts about certain directions were never expressed. Therefore, to provide a common base of understanding for those sponsoring, developing, teaching and participating in the Maine Studies Curriculum, the following fundamental assumptions have been identified:

1. The participation of knowledgeable, skilled and motivated citizens in a government which is founded upon the principles of a democratic decision-making process can promote the human welfare of present and future generations.
2. The institution of State government provides an effective level for such a democratic decision-making process.
3. An educational program focused on state studies can be developed which significantly increases the motivation and ability of citizens to participate effectively in government at all levels.

A POINT OF PHILOSOPHY

In addition to describing the historic roots, rationale and underlying thoughts of the Maine Studies Curriculum it is important to also lay bare the overriding educational philosophy which strongly influences the effort. If there is any one major philosophical point which should be expressed, it is the belief that education should strive to help individuals and society find human identity and respect. Therefore, throughout the program the emphasis will be on helping both students and teachers develop a respect for themselves and others and establish their identities as individuals, as members of groups, as citizens in society and as human beings on planet earth. It is, after all, only in this way that the full concept of State, which underlies this curriculum, can be understood and extended to an active concern for human welfare no matter the arbitrariness of political boundaries and delegated scope of government.

WHAT A CURRICULUM IS

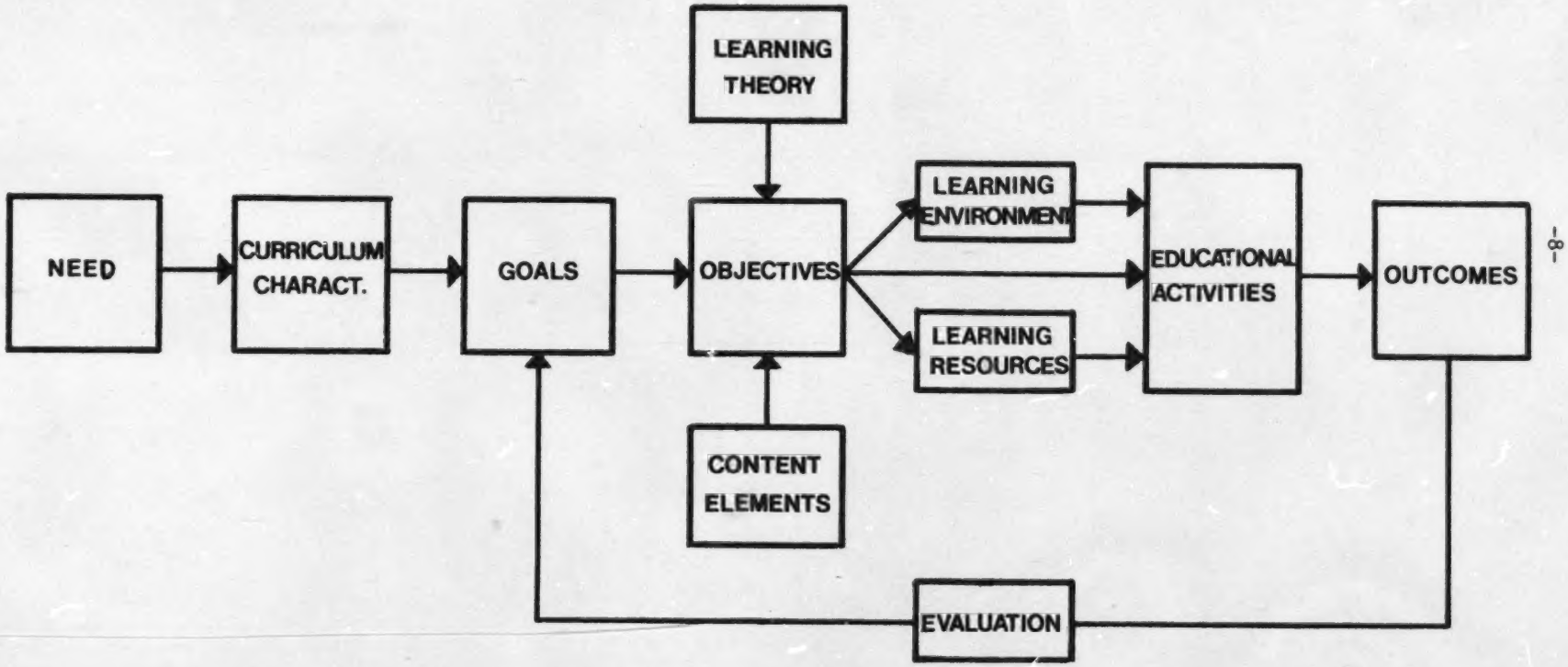
A curriculum is a well thought-out plan which guides the educational process. It is not the actual teaching itself; the teaching and learning activities are in effect the implementation of the curriculum or plan. The curriculum answers such questions as what shall be taught and by what means will it be carried out.

Figure One is a diagram illustrating the components of the Maine

Studies Curriculum and how they interrelate. Briefly, major characteristics and goals of the curriculum are drawn from the assumptions relating to the need for the curriculum and the role of education. Next, the goals and curriculum characteristics in conjunction with relevant research findings on theories of instruction and learning and content elements (knowledge, values and skills) provide the basis for the development of the measurable objectives. The objectives in turn guide development and evaluation of the learning environment, the learning resources and the educational activities. The learning environment, consisting of the teacher and the physical and psychological characteristics of the educational setting, and the learning resources establish the learning climate in which the educational activities take place. The educational activities are what teachers and students do. These may be presented as independent activities or activities sequenced in a series. Finally the activities lead to a variety of outcomes, some measurable through evaluation procedures and others more difficult to measure, identify, or even to attribute to the program. The primary purpose of evaluation is the improvement of the educational program at all stages of the process.

SCHEMATIC OF THE MAINE STUDIES CURRICULUM

FIG. 1



CURRICULUM CHARACTERISTICS

The characteristics of a curriculum describe in general terms key elements relating to its focus, scope, organization and implementation. Decisions regarding these dimensions should be made early in the curriculum development process. The following are the major characteristics of the Maine Studies Curriculum:

1. Spans kindergarten through grade twelve with units at the elementary levels, a year long social studies course with supplementary activities for other subject areas at the junior high levels and units at the senior high levels.

2. Establishes clear relationships and continuity between needs, goals, learning theory, content, objectives, learning environment and resources, activities, out-comes and evaluation.

3. Develops measurable objectives for both student behavior and the learning environment.

4. Bases educational activities on current theories of instruction and learning.

5. Organizes the learning environment and instructional resources to maximize the achievement of educational goals.

6. Develops and improves teacher competencies including teacher self-perception of personal role and ability.

7. Encourages productive and human relationships between students and teachers.

8. Promotes self-motivated learning through development of positive student self-concepts.

9. Provides for both individual and group needs and interests.

10. Stresses interdisciplinary studies, in which several subject areas interrelate, by basing content on broad issue-related themes.

11. Provides first-hand, real-life learning experiences.

12. Presents content in terms of a time perspective (past, present and future) and a space perspective of geographic influences and effects (local, state, national and global) with an emphasis on the state.

13. Provides for the interrelated and simultaneous development of the students' knowledge, attitudes and values and skills.

14. Stresses concepts and higher cognitive thinking skills, for example, problem-solving and decision making, over the acquisition of information and memorization of facts.

15. Integrates and correlates content and activities with the existing curriculum.

16. Establishes evaluation as an integral part of the curriculum planning and implementation.

GOALS

The goals of an educational program are broad statements of expectation toward which the educational effort is directed. They provide the framework for the more specifically stated objectives which allow for the measurement of factors that indicate the extent goals are achieved.

STUDENT GOALS

1. Knowledge Goal

To help students gain and continue to acquire a broad experienced-based factual and conceptual understanding of critical factors and processes affecting the well-being of citizens from historic, present and future perspectives.

2. Attitudes and Values Goal

To help students acquire now and in the future those attitudes and values which reflect a strong, positive self-concept and which motivate them to initiate and participate in ethical and value-consistent actions to improve themselves and the well-being of others.

3. Actions and Skills Goal

To help students develop and successfully use critical thinking, values clarifying and problem-solving skills to improve themselves, their human relationships and the well-being of others now and in the future.

LEARNING ENVIRONMENT GOALS

1. Teacher Goal

To help teachers develop and improve those competencies, including confidence in their own abilities and sense of individual worth, which are critical to the successful attainment of the student goals.

2. Educational Setting Goal

To create an educational "atmosphere" and physical setting which maximizes the achievement of student and teacher goals.

3. Instructional Resources Goal

To select, develop and prescribe the use of instructional resources, including human resources, media and printed materials, which effectively support the teaching and learning processes.

GUIDING THEORIES OF INSTRUCTION AND LEARNING

It is important early in the development of a curriculum to identify current theories of instruction and learning. As the products of educational thinking and research, such theories are critical to translating goals into the methods which are aimed at achieving the goals. More specifically, the guiding theories of education together with the content elements provide direction for the development of objectives and, perhaps even more importantly, the activities.

The activities are the how of the curriculum - the ways in which it is implemented and taught. The how includes both the student activities and the teaching and classroom management techniques. It is imperative that the selection and planning of teacher/student educational activities be based upon the best thinking and research available on teaching and learning.

The following theories have been extensively researched[4] and have been selected as particularly important to successfully achieving the goals and objectives of the Maine Studies Curriculum:

GENERAL EDUCATIONAL DEVELOPMENT

1. Child Development

Educational methods should be appropriate to the development stage (mental and physical) of the student. The child's state of readiness should affect the kind and timing of learning experiences and thus the efficiency, effectiveness and the motivation of the teaching.

2. Hemisphere Differences[5]

Research indicates that people have in effect two brains - the left hemisphere which perceives time relationships and significance and

the right hemisphere which perceives visual and spatial relationships. For example, students with a predisposition to use their left brain find it easier to read and comprehend complex instructions whereas those with right brain development find geometry easier than algebra and graphs easier to interpret than an equation. Teachers should help students develop both sides of their brains by, for example, giving both verbal and visual explanations.

3. Range of Challenge

Learning experiences which challenge the student and offer the liklihood, but not the certainty, of success in the completion of activities can provide motivation and influence the level of aspiration.

4. Student/Teacher Planning

The experience and guidance of the teacher is the key to the productiveness as well as to the efficiency of learning, however, student participation in the selection and planning of learning experiences can be an important motivating factor.

5. Sequence of Activities in Learning Processes

Cognitive, (understanding and thinking), affective (feeling) and psycho-motor (manipulating-acting) domains can be developed through a learning process consisting of activities organized in a sequence of complexity ranging from discovery through problem-solving and resolving issues.

6. Dynamic Methods of Involvement

Dynamic methods of inquiry and self-discovery develop a motivation to experience the learning process as well as develop inquiry skills.

7. Student Inquiry Questions

Inquiry approaches in which students are stimualted to ask their own questions are even more desirable than those in which they are asked questions.

8. Reinforcement

Reinforcement provides an effective way of shaping behavior and increasing the strength of what is learned. Concerning reinforcement:

a. That which is learned will be most effectively retained if it is applied and positively reinforced soon after learning and by the elements in student's environment - the home, school, community, etc.

b. Individuals differ in events that may be reinforcing, for example, for some students grades may be rewarding while for others it may be peer praise.

c. Reinforcements may be effective if given in small amounts and may be more effective if distributed randomly in time.

d. Information is an important reinforcer in education and can work both if given in advance and if given as feedback following a response or activity.

e. According to the theory of positive reinforcement students learn better if they know what the objectives or expectations of their learning experiences are.

f. Successful completion of a task may reinforce the behavior which led up to the correct solution.

9. Group Interaction

The establishment of small study groups can have positive effects on learning.

a. Students tend to be more productive when working in group situations.

b. Group work may provide reinforcement otherwise lacking.

c. Individuals tend to modify attitudes to conform to the group with which they are identified.

ATTITUDES AND VALUES DEVELOPMENT

1. Self-Concept

A healthy self-image, according to many psychologists and educators, may be the single most important attitude to develop since how one feels about one's self affects all other relations.

2. Self-Concept Development

Self-concept is developed through interaction with others - seeing one's self through the response of others.

3. The Teacher's Self-Concept

The possession of a positive self-concept by the teacher is the most important characteristic a teacher can have in order to develop a positive self-image in the student.

4. Teachers' Values

The processes of values clarification and socialization can be promoted by teachers who, along with their students, openly express and encourage criticism of their own values.

5. Teaching Valuing[6, 7, 8]

The process of valuing and values can be taught in a classroom atmosphere characterized by acceptance, warmth, freedom of expression and mutual respect. It involves personalizing education, relating learning to the students' own life and concerns and the making of free, enlightened and impartial choices.

6. Developing Attitudes and Values Which Lead to Desired Behavior

One approach to developing attitudes and values which lead to behavior is to provide a learning environment and learning experiences that produce the attitudes which in turn internally motivate the students to act in desired ways.

7. Forming Behavior Which Leads to Desired Attitudes and Values

Another approach to developing attitudes and values can use the

theory of cognitive dissonance. In this theory a student is caused to behave or act in a desired way and then is provided information which is used to rationalize the behavior and form attitudes which are consistent with the actions. Self-concept attitudes, as an example, can be developed in this way since individuals may rely on external cues to determine their attitudes toward themselves.

8. Novelty

The effect of novelty in educational activities can spark interest and produce motivation.

COGNITIVE DEVELOPMENT

1. Concept Development

A concept is learned through experiences involving the higher cognitive skills, e.g., analysis, synthesis and evaluation.

2. Concept Learning

The learning of concepts involves identifying the attributes of and abstract relationships between phenomena. The time required for concept learning may be shortened by providing verbal or visual cues concerning the nature of attributes and interrelationships.

3. Transfer of Learning

The learning of concepts may provide superior possibilities, over the learning of facts, for the transfer of learning to new situations.

4. Perception

The perceptual system has a limited capacity for handling information and can handle information from only one source at a time when working to capacity.

5. Retention

Forgetting may be minimized by overlearning and by periodic use, review and reinforcement.

SKILLS DEVELOPMENT

1. Learning Activities Based on Desired Skills

The development of thinking and manipulative skills occurs most efficiently and effectively when learning activities directly reflect the skills desired. For example, inquiry skills are best developed through inquiry activities.

2. Transfer of Training

Transfer of training occurs when a learned behavior can help create or affect other behavior. Transfer occurs to the extent tasks are similar and is most likely to occur with well practiced skills.

CONTENT ELEMENTS

The content elements of the curriculum are the what of the educational program. They are the understandings, values and skills the program aims to have students acquire in order to achieve the curriculum's goals. In this respect they form the basis for the development of objectives, learning activities and evaluation methods. Accordingly, the following content elements have been identified for the Maine Studies Curriculum:

1. COGNITIVE UNDERSTANDINGS

Cognitive understanding refers to what people know and comprehend. The scope of an individual's understanding may range from concrete facts to abstract concepts and generalizations. Understandings are important because it is believed that they combine with feelings to form attitudes and values and that they are the basis for rational action.

a. Conceptual Themes

As a first level of organization for conceptual understanding, a theme approach has been adopted. Conceptual themes have been selected which represent major dimensions of human activity. These provide a framework for the study of issues, the acquisition of factual knowledge and the development of concepts and generalizations.

One of the major reasons for selecting a thematic approach is its potential to facilitate interdisciplinary studies. The Maine Studies Curriculum seeks to avoid compartmentalization of studies into subject areas such as geography, history, sociology and anthropology. While such approaches have their merits, the theme organization is more suited to the inquiry and problem-solving goals of this program. Since the conceptual themes are broad areas of human concern, opportunities are presented for developing skills which help students learn and apply a whole "tool kit" of concepts representing many fields of study. The economic theme, for example, involves concepts in the field of history, geography, sociology and anthropology. It is also noted that the themes, themselves, are interrelated and studies of topics and issues in one will frequently include others, e.g., the political system interrelates with the economic system.

Studies within each theme include a time context - historic, current and future - to show trends and give students perspectives for decision-making.[9] In addition, studies within each theme have a geographic or spatial dimension, i.e., local, state, national and global.

Theme One: ENVIRONMENT

The environment includes both the natural resources we depend upon for survival and the effects of our activities on our surroundings. The concept of environment includes people as a part of nature.

Examples of Study Topics:

Natural resources

Geography

Human settlements

Environmental problems and issues

Theme Two: POLITICS AND GOVERNMENT

The theme of Politics and Government relates to the organizations and political processes through which decisions are made by society to satisfy its needs and wants.

Examples of Study Topics:

Social and Governmental organization

Political processes

Law and justice

Citizen participation

Government problems and issues

Theme Three: TECHNOLOGY

Technology is the application of science to industry. It includes the use of processes, tools and equipment to alter resources and produce products and services which meet human needs and wants.

Examples of Study Topics:

Research and development

Agricultural production

Industrial resources production

Energy production

Manufacturing and construction

Transportation and communication

Technological problems and issues

Theme Four: ECONOMY

The economic system allocates scarce resources to provide goods and services which meet human needs and wants. Economic choices are made through a market system which allocates resources and products of our technology according to the laws of supply and demand.

Examples of Study Topics:

Economic resources - land, labor and capital

Economic geography

Economic organization

Economic activities

Economic goods and services

Government and the economy

Economic problems and issues

Theme Five: SOCIAL LIFE

The quality of the environment and availability of resources, political decision-making processes, technological applications, and the economic allocation of goods and services are aimed at improving our social life. Social life refers to people - their individual and social characteristics and activities.

Examples of Study Topics:

Population characteristics

Lifestyles

Human settlement

Work and production

Transportation

Communication

Education

Religion

Recreation

Social organization

Government

Science and technology

The arts

Economy

Human services

Social conflict

Social problems and issues

b. Concepts and Generalizations

Within the broad conceptual themes students develop concepts and generalizations[10] which enable them to understand the complex world around them and act rationally to help resolve the issues they face. A concept is an abstract idea expressed by a word which represents a class or group of things, events, ideas or feelings which have characteristics in common. For example, the concept of water includes raindrops and lakes, but excludes land, plants, etc. Concepts differ in level of abstraction, for example, the concepts "state" represents several ideas - political boundaries, land area, population, etc.

A higher abstraction than the concept is the generalization. It is an understanding of a relationship between concepts which is

expressed as a generalized statement. The following statement is an example of a generalization in economics: Choices are made whenever money is spent or saved. Such a statement can be tested for truth or validity and in that sense can be called an hypothesis.

The acquisition of concepts provides a framework for understanding the relationships between facts and for organizing and using information. The ability to make generalizations further increases the students' understandings of their world and their abilities to make sound decisions. In addition, a focus on concepts and generalization provides a way students can meaningfully learn in face of the impossible task of digesting the multitude of facts encompassed by a subject area.

1) Linking Concepts

The number of generalizations which might be identified for students to grasp is infinite. Indeed, books have been written which contain long lists of generalizations. This curriculum, rather than attempting a broad survey of generalizations, which at best will not be complete and even less agreed upon, stresses that students acquire three concepts which are inherent in generalizations and which express dimensions with which generalization deal. These three concepts by the nature of their meaning are more abstract than the individual concepts which follow. They are termed linking concepts because they deal more with processes and in that respect serve to link individual concepts. For example, the generalization, "culture is the product of generations of human invention," reflects the concepts of interrelationships and change. Generalizations may also reflect ethics or values, e.g., "freedom and rights of one individual must not violate the rights of others."

a) Interrelationships

The mutual relationships, interactions, and interdependencies which exist between things, events, ideas and feelings.

b) Change

What happens to things, events, ideas and feelings which make them different now than they were before.

c) Ethics

The principles of right and wrong and good and bad by which people judge things, events, ideas and feelings including their interrelationships and changes.

2) Theme Concepts

The following concepts are the things, events, ideas and feelings which relate to the conceptual themes and about which students may generalize. (that is, make statements relating to their interrelationships, changes and ethical dimensions) These represent only a tentative listing of those concepts considered for inclusion in the curriculum. The list is neither exhaustive nor final. Attention is also drawn to the large number of concepts identified within the social life theme. This reflects the fact that this theme is central to the other four.

a) Theme Concepts

(1) Environment

Air	Conservation	Ecosystem
Animals	Consumer	Energy
Association	Country	Exponential
Balance of Nature	Cycles	Food chain
Climate	Distribution	Food web
Concentration	Earth	Heredity

Land
Life cycle
Life support system
Living things
Location
Planet
Plants
Pollution
Population
Recycling
Regions
Resources
Solar system
Spaceship earth
Species
Universe
Urban
Water

(2) Politics and Government

Anarchy
Authority
Citizenship
Compromise
Constitution
Decision-making
Democracy
Dictatorship
Factions
Federalism
Freedom
Ideology
Imperialism
Institutions
Interdependence
Internationalism
Justice
Law
Leadership
Legal
Monarchy
Nation
Nationalism
Parties
Philosophy
Pluralism
Power
Region
Repression
Revolution
Rules
Social Control
Social Justice
State

(3) Technology

Communications Technology
Construction
Craftsmanship
Development
Electronics
Energy
Engineering
Industrialization
Intermediate technology
Invention
Machine
Manufacturing
Mass production
Production
Research
Science
Technological gap
Technology transfer
Tools
Transportation technology

(4) Economy

Benefits
Business
Capital
Capitalism
Cause and effect
Competition
Conservation
Consumerism
Consumption
Costs
Demand
Dependence
Diversity
Division of labor
Economic change
Economic development
Economic distribution
Economic lifestyle
Economic self-sufficiency
Efficiency
Employment
Entrepreneur
Exchange
Export
Fairness
Finance
Goods
Greed
Gross National Product
Growth
Human resources
Imperialism
Import
Income
Interdependence
Investment
Labor
Land
Market
Marginal
Materialism
Money
Moral
Motivation
Natural resources
Needs
Price system
Production
Production factors
Profit
Responsibility
Satisfactions
Scale
Scarcity
Security
Services
Social costs
Specialization
Stability
Supply
Tanstaafl
Through-put economy
Trade
Use
Values
Value-added
Wants
Wealth
Welfare

(5) Social Life

Aesthetic
Affection
Alteration
Beauty
Behavior
Beliefs
Causation
City
Church
Communication
Competition
Concept
Conflict
Conservation
Cooperation
Culture
Cultural change
Communication
Community
Custom
Demography
Dependence
Diversity
Dynamic
Education
Emotions
Evolution
Fact
Fairness
Family
Feelings
Forecast
Future
Generalization
Global
Goals
Groups
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Heredity
History
Human being
Humanitarianism
Human settlement
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Language
Learning
Maturation
Metropolis
Moral
Motivation
Needs
Network
Norms
Opinions
Perceptions
Personality
Population
Population explosion
Priority
Processes
Race
Reasoning
Recreation
Religion
Responsibility
Rights
Role
Satisfaction
School
Self-esteem
Self-fulfillment
Senses
Services
Society
Social change
Social class
Social discrimination
Social interaction
Socialization
Social lag

Social needs	Status	Uniqueness
Spatial distribution	Suburb	Urbanization
Spatial interaction	Survival	Values
Stability	System	
Static	Traditions	

c. Facts

Facts refer to information about specific things, events, ideas and feelings which can be verified by observation. However, as mentioned previously, the emphasis of the curriculum is on acquiring concepts which give meaning to facts and developing skills in gathering and interpreting facts. Therefore, in the process of concept formation and decision-making, facts are seen as the "grist for the mill." But it is expected that as a result of their studies within the conceptual themes students will acquire a broad factual base of information about their state including its history, geography and resources. However, to reiterate, the major focus of the curriculum is on the thinking processes involved with those skills and understandings students will use throughout their lives.

2. ATTITUDES AND VALUES

This content area refers to how students feel and what they believe to be worthwhile. It relates to basic human needs. It includes perceptions of positive and negative, good and bad, likes and dislikes, and right and wrong about things, events and ideas. These perceptions or attitudes consist of both feelings and knowledge. Further, it is believed that if feelings are strong enough the individual has a tendency to act towards the objects of attitudes. Attitudes are also thought to be a part of values. Values are the predominant views individuals have or major guiding forces in their lives. Values relate to the decisions

people make about desired ends and the means of achieving those ends. Values are central to our way of life. It is differences in values which create issues. Decisions on issues require the clarification of the values involved and choices between values. An awareness of values leads to greater consistency between values, decisions and actions.

This curriculum is concerned in particular with the clarification and development of the following attitudes and values:

a. Self (Self-Concept)

A healthy self-concept, including the feeling of individual worth and the desire to improve one's self through continued learning, is fundamental to the happiness and success of individuals and society. Self-concept includes attitudes and values related to: independence, personal rights, individual freedoms and self sufficiency. These values meet individual needs including self-esteem, understanding and self-actualization.

b. Others (Social Responsibility)

A positive social concept or concern and respect for others, both present and future generations, is essential for the well-being of both individuals and society. Social responsibility includes attitudes and values related to: social justice, public welfare and property, honesty, human relationships and social order. These values meet individual needs including belonging, security, love, peace and safety.

c. Environment (Environmental Ethic)

A respect for the delicate ecological balance of the natural environment and a concern for the effects of human activities is vital to psychological, physical and social well being. Environmental ethic includes attitudes and values related to aesthetics, environ-

mental quality and ecological stability. These values meet individual needs including beauty, safety and security.

3. PROCESS SKILLS

This area of learning refers to the development of abilities in both thinking and acting. In particular, reflecting the skills goal of the curriculum, the focus is on those skills which will enable students to acquire understandings, clarify attitudes and values and act rationally on the problems and issues they encounter. In short, these are the "tools" for learning and acting which will carry beyond the school setting and the student's period of formal education.

Basically, the curriculum is organized around the Inquiry-Problem Solving Skills citizens need throughout life for continued self-improvement and citizenship responsibility. In the following skills chart these skills are listed in a sequence as they might commonly be carried out to research a question or resolve a social issue or problem. The skills also may be thought of as learning activities - the things students do and experience in a learning process.

As students participate in inquiry - problem solving skill activities, they will have opportunities to use and develop three additional kinds of skills: thinking skills, valuing skills and manipulative skills.

The thinking skills listed below are those commonly associated with critical thinking development in the social studies and science disciplines. They are arranged in a sequence approximating levels of complexity and difficulty.

a. Observing

Inspecting and noting things and their characteristics.

b. Analyzing

Breaking down a knowledge of things into fundamental parts or into individual pieces of information.

c. Comparing and Contrasting

Recognizing important differences and similarities between things.

d. Classifying

Grouping related things together according to similarities.

e. Inferring and Conceptualizing

Forming ideas and mental images which give meaning to facts and observations and explain their relationships.

f. Generalizing

Describing abstract relationships between concepts.

g. Synthesizing

Putting the parts of things -- pieces of information, facts, ideas -- together in order to see the total or whole meaning.

h. Defining and Interpreting

Describing and explaining the meaning of things in familiar terms.

i. Predicting

Forecasting or declaring in advance what events or changes will occur in the future.

j. Hypothesizing

Making tentative explanations of observations in order to test their agreement with facts.

k. Testing Predictions and Hypotheses

Assembling and checking facts to determine support or contradiction of predictions and hypotheses.

1. Evaluating

Making judgments about the worth of things.

In the skills chart the thinking skills have been identified with those inquiry problem-solving skills to which they closely relate and where clear opportunities exist for their development. It is recognized, however, that, depending on the nature of specific inquiry problem-solving activities, opportunities will exist for the development of thinking skills other than those generally associated in the chart.

The valuing skills presented in the skills chart are also related to the inquiry and problem-solving activity skills. They represent a process of clarifying values and making values decisions which closely parallels the problem-solving steps.[12, 13, 14] Indeed, both problem-solving and valuing skills can be developed simultaneously.

The final category of skills are those of a manipulative nature - often referred to as psycho-motor skills. These are involved throughout the inquiry and problem-solving processes. Attention should also be paid to their development in the total learning process.

SKILLS CHART

Inquiry and Problem Solving Activity Skills	Related Thinking Skills	Related Valuing Skills	Related Manipulative Skills
1. Identifying research questions and social problems and issues	Observing Classifying		Communicating (speaking, writing, reading, listening)
2. Selecting and defining a question, problem or issue	Evaluating, Defining and Interpreting	1. Clarifying the values question 2. Determining the major values involved-identifying concerns	Communicating
3. Researching and acquiring information about the question, problem or issue	Observing	3. Gathering facts - separating facts from opinion	Communicating
4. Processing information to understand the question, problem or issue	Observing Analyzing Comparing and Contrasting Classifying Inferring and Conceptualizing Synthesizing Generalizing	4. Categorizing facts according to concern 5. Accessing truth and relevance 6. Accessing sources of information	Communicating Operating data collection devices (recorders, cameras)
5. Reporting, information, results or conclusions	Defining and interpreting		Communicating Graphing Mapping
6. Developing alternative solutions to the problem or issue	Inferring and conceptualizing Generalizing Synthesizing	7. Identifying alternative solutions	Communicating Developing models

SKILLS CHART (continued):

Inquiry and Problem Solving Activity Skills	Related Thinking Skills	Related Valuing Skills	Related Manipulative Skills
7. Choosing solutions to the problem or issue	Predicting Hypothesizing	8. Listing positive and negative consequences of alternatives 9. Choosing freely - making decisions 10. Testing issues against principle values or concerns	Communicating
8. Developing plans to help resolve the problem or issue	Testing Predictions and Hypotheses	11. Developing plans to act on choices	Communicating Drawing
9. Implementing plans to help resolve the problem or issue	Testing Predictions and Hypotheses	12. Affirming choices publically 13. Acting on choices 14. Repeating actions	Communicating Using tools and equipment
10. Evaluating actions	Evaluating		Communicating

OBJECTIVES

The objectives of the curriculum are developed for each goal. Unlike the more general goal statements these are statements which specifically describe measurable phenomena and indicate the extent of goal achievement. Two categories of objectives are developed: (1) student performance objectives which indicate the extent knowledge, feelings and skills have been developed and (2) learning environment objectives which provide a means of assessing teacher competencies, the educational setting (atmosphere and physical characteristics) and the learning resources.

It is recognized that exclusive reliance on student behavioral objectives to guide instruction and evaluation has certain limitations. One particular concern relates to the impossibility of identifying objectives for all conceivable outcomes. Many believe that the unfortunate result of limiting education to only those objectives identified in advance has been that important unanticipated and unmeasurable outcomes have occurred which have been overlooked and which may have been more important than those which were planned. To overcome this problem an alternative to the behavioral objective approach has been suggested by some educators.[15] They believe that the emphasis should be on developing learning environments which facilitate a variety of student behaviors and growth in many developmental areas of the cognitive, affective and psychomotor domains. These rich learning environments should be based on assumptions about what students are capable of displaying and learning, e.g., respect for others, intelligent effort, etc. This is in contrast to the behavioral objective approach where specific measurable outcomes

are stated for children to attain followed by a focus on educational methods specifically designed to achieve the predetermined outcomes.

Since both of these views have their merits, this curriculum includes both kinds of objectives stressing each equally. For example, there are a few behavioral objectives for each unit or activity for those specific outcomes which are viewed as important by the program developers, teachers and students. There are also learning environment objectives which provide criteria for assessing teacher activities, the educational setting and learning resources.

The development of all objectives is influenced by both learning theory and decisions regarding content elements. For example, theories about the value of self-concept and the role of the teacher suggest that objectives emphasize this. Likewise, content objectives reflecting identified concepts, values, and skills are developed.

Following are the general content objectives of the curriculum. These provide the framework for the specific behavioral objectives to be developed for each activity. They also aid in the identification of understandings and selection of factual information.

GENERAL STUDENT OBJECTIVES

Knowledge Objectives:

1. To help students acquire an understanding of the characteristics of Maine's social life, environment, politics and government, economy and government.

2. To help students acquire an understanding of important interrelationships, both within and outside the State, affecting Maine's social life, environment, politics and government, economy and technology.

3. To help students acquire an understanding of important changes, including problems and issues, related to the historic development,

current trends and future of Maine's social life, environment, politics and government, economy and technology.

4. To help students acquire an understanding of the role of ethics or human values in events and issues associated with Maine's social life, environment, politics and government, economy and technology.

Attitudes and Values Objectives:

1. To help students clarify and develop their own values related to self-identity and individual worth.

2. To help students clarify and develop their own values related to their relationships with others.

3. To help students clarify and develop their own values related to their relationships with their environment including the effects of human activities.

Skill Objectives:

1. To help students develop thinking, valuing and manipulative skills related to inquiry and research.

2. To help students develop thinking, valuing and manipulative skills related to problem-solving and decision-making.

LEARNING ENVIRONMENT

The environment in which learning takes place is as critical to the success of education as the learning experiences themselves. Such an environment should contain those ingredients which will both optimize learning opportunities and encourage students to take advantage of those opportunities. It is important, therefore, to identify those characteristics of learning environments which will meet these tasks.[16] The Maine

Studies Curriculum stresses two broad components of the learning environment which should be developed - the teacher and the educational setting.

The teacher is the most important influence in the learning environment. It is the teacher who establishes the atmosphere for learning and makes the physical setting stimulating. In essence, it is the understandings, attitudes and values and skills which the teacher possesses and how they are used which determine what the learning environment is like. Although these critical variables are detailed in the Teacher Education Program Guidelines, one in particular is emphasized. In keeping with the philosophy of this curriculum, the single most important characteristic possessed by teachers are those attitudes they hold toward themselves and their students.

The educational setting, both its psychological and physical dimensions, must also be considered and defined. The psychological setting, frequently referred to as the classroom atmosphere, is determined primarily by the attitudes of teachers and students. The interaction between teachers and students and between students themselves must be one of openness, mutual respect and trust. These are the determinants of self-concept from which human happiness and individual development are possible.

The psychological setting is also influenced by the physical characteristics of the learning environment. This curriculum suggests a variety of physical settings both inside and outside the classroom.

For example, a cemetery might be used for a first-hand history investigation or the chambers of the city council for a study of the operation of local government. The classroom, itself, should be arranged and organized so that resources are displayed and accessible to promote efficiency and interest in learning. Criteria for assessing the educational setting are detailed in the Learning Environment Guidelines of the Maine Studies Curriculum.

LEARNING RESOURCES

Learning resources include people, printed materials and audiovisual media. In conjunction with the teacher and the educational setting, resources are, if properly planned and used, an indispensable part of the learning environment. The most important criteria for learning resources in this curriculum is the potential they have to motivate students to self-directed inquiry. For example, references and texts are viewed as research material not as information and conclusions to be accepted and memorized. Further, in this respect the curriculum wherever possible provides and encourages the use of primary sources of information - original documents, interviews with people, etc. And in situations where secondary sources are provided, for example, the interpretation of historic events, students are challenged to examine the author's sources, biases, differences with other sources, and so on.

Learning resources for a curriculum such as this are virtually infinite. In a sense everything which enhances the learning process is a resource. Teachers and students are encouraged to recognize and use resources of all kinds in addition to those formally prepared for the curriculum.

EDUCATIONAL ACTIVITIES

Educational activities - the learning experiences students have - are the core of the curriculum. They are the means to the ends. Supported by the teacher, the educational setting and learning resources and well

grounded in educational research, educational activities have a potential for effectively achieving the curriculum's objectives. Basically, educational activities may be thought of from two perspectives - what the student does and what the teacher does.

1. Student Learning Activities

Fundamentally, learning activities are designed to achieve objectives and to reflect accepted theories of learning. In particular, student activities in this curriculum emphasize the kind of student involvement which is characterized by self-initiated direction. In keeping with trends in social studies and science, the nature of this involvement is inquiry - problem solving. Such an approach stresses the involvement of students in decisions regarding, for example, the selection of activities, establishing personal objectives, identifying study issues which are significant to them and researching and organizing data for themselves as opposed to being presented with information by the teacher and textbooks. It is further believed that strategies of this kind lend themselves to developing carry-over skills, concept development and personal values clarification.

The basis for the student activities is to be found in the inquiry and problem-solving skills outlined in the Skills Chart. The ten skills can be considered as ten different kinds of activities. Any one of these activities may be carried out independently of the others or several activities can be carried out in a sequence. For example, if a student wishes to identify and investigate a research question so as to arrive at a conclusion, the inquiry activities one through five can be completed. Or, if a student wishes to identify a problem or issue, investigate it and do something about it, the student can complete all ten skill activities. In the process of engaging in each activity, the student develops skills, and by asking and answering key thinking and

feeling questions about the activities, the student grasps concepts, learns to make generalizations and clarifies attitudes and values.

A final word is in order regarding the individualization of learning activities. The emphasis on skill development activities and the use of conceptual themes and issues provide opportunities for student-tailored independent and small group activities.

2. Teacher Instructional Activities

In addition to student activities, the curriculum provides instructional activities which give direction to the teacher. These activities relate to what the teacher does to successfully initiate, develop and reinforce the learning. As with student activities, these, too, reflect objectives. And as stated previously these activities emphasize the role of the teacher as a facilitator of learning who works as a co-learner with the student and who is concerned with the development of the student's concept of self. Again the inquiry and problem-solving approach is well suited to these purposes. It is recognized, however, that such a method is time consuming and that, after all, it is impossible to have students learn everything first-hand. And even if it were possible, students are capable of learning many things more efficiently through exposure, thus, capitalizing on what people before them have learned, often through rigorous and time consuming original research.

Therefore, teacher instructional activities also include expository methods as well as discovery techniques.

3. Activities and Subject Areas

Although this curriculum is written in particular for the social studies, it is strongly related to other subject areas. In fact, its conceptual themes and focus on issues require that concepts and skills from many disciplines be interrelated if the themes and issues are to be dealt with adequately. For these reasons, the curriculum is termed interdisci-

plinary, - i.e., it interrelates the disciplines to achieve a total understanding.

There are several points to be considered in viewing the relationship of Maine Studies to the disciplines. For many subjects, the relationship is clearly one of content - the various subjects by the topics and concepts they present naturally include "state studies" concerns. Social studies and science are examples of this. Other subjects, such as art, language arts and mathematics, are more aimed at the development of basic skills and development of the senses. In the process of developing these abilities in students these subject areas provide opportunities to focus on problems, issues, and topics which relate to Maine. For example, one state has developed a unit on mathematics using the state highway map.

Another point of consideration involves the integration of subjects in which related aspects of "state studies" is a part of their commonly taught content.[17] Essentially some subjects cover the same content, e.g., earth science and geography which are both concerned with landforms. These situations allow for integration of the subject areas and the possibility of joint, concurrent sessions. In other instances subjects cover complementary and overlapping topics, e.g., biology which introduces ecological characteristics of an area and geography which discusses an area's resources. This relationship provides opportunities for one subject to support another with independent, concurrent or consecutive classes.

A third point is concerned with interdisciplinary studies. Subjects which deal with social issues must branch out to include the content of other disciplines if the issues are to be fully understood. For example, the issue of welfare encompasses concepts taught in such disciplines as sociology, economics and government. The options for handling the

interdisciplinary learning setting in a subject area include: (1) one teacher guiding the study, (2) one teacher in a subject area assisted by other teachers acting as resource people, (3) two or more teachers team-teaching the study.

Finally, a word can be said regarding how science and social studies often use two different learning approaches which lead to inter-related content.[18] Social studies activities frequently begin with studies of social concerns and later, as student investigation proceeds, involve studies of science phonomena. For example, students may initially inquire into the population problem and eventually find themselves studying the characteristics of natural resources, nature of climatic effects and effects of disease and aging. Science, on the other hand, usually introduces students to the characteristics of natural phonomena, such as soil or land formation. Later as the studies progress the students encounter related social conserns such as soil erosion and siltation, pollution of ground water supplies and over-development.

Recognizing these two fundamental approaches provides opportunities to construct interdisciplinary, issue oriented "state studies" units.

EVALUATION

Evaluation is a process of deciding on the worth of something. The primary purpose of evaluation in this curriculum is to improve the educational program with the ultimate aim of achieving the student outcome objectives. Essentially evaluation, to achieve this purpose, is concerned with the worth of products or program results and the processes which create the products or results. The major products as indicated above

have to do with changes in the student. The measurement of these changes or outcomes provide the primary means of assessing the worth of the educational program. The program, according to the curriculum model, consists of the educational process which develops the primary product - student outcomes. In addition, the program consists of secondary products - the teacher attitudes, understandings and skills, the educational setting and the learning resources. These are produced by secondary processes, e.g., the teacher education program. It is important to identify all the critical processes and products of the program so that weaknesses and strengths can be pinpointed.

The actual evaluation of the processes and products occurs throughout the development of the curriculum. That evaluation which is carried out during the development and testing of a curriculum is termed formative evaluation. In this kind of evaluation, measurement results are used to make decisions regarding possible mid-course corrections and changes on all aspects of the curriculum. These may be decisions about goals, objectives, the learning environment, learning resources and instructional and learning activities.

The final evaluation of outcomes is termed summative evaluation. This refers particularly to the measurement of student outcomes at the end of program development. Its primary purpose is to provide data useful for decisions regarding the adoption of the curriculum by schools. The product of the project evaluation effort, itself, is a set of evaluation methods and instruments which teachers and students themselves can use. These consist of both informal and formal methods. Informal techniques include class discussions and random observation. Formal methods include pre and post testing using systematic procedures.[19]

Finally, evaluation in the Maine Studies Curriculum is an integral and on-going part of the total curriculum development and implementation process.

FOOTNOTES

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